AMENDMENTS TO THE CLAIMS

1 - 9 (cancelled)

10. (Currently amended) A burst detection system for detecting a burst in an incoming signal comprising:

a signal strength change detector for determining strength changes in the incoming signal;

signal strength detection logic for determining if a change in signal strength of a predetermined magnitude has occurred;

a pattern detector for monitoring patterns of symbols in the incoming signal to determine if a predetermined pattern is present;

a burst detector for signaling a detection of a burst if the signal strength change detection logic determines that a signal strength change of predetermined magnitude has occurred and the pattern detector determines that a predetermined pattern of symbols is present;

a signal strength indicator for indicating the strength of the incoming signal;

a short-term signal strength change detector for determining, responsive to the signal strength indicator, short-term changes in signal strength, and a long-term signal strength change indicator for determining, responsive to the signal strength indicator, longterm changes in signal strength;

wherein the signal strength detection logic is configured to determine, responsive to the short-term and long-term signal strength change detectors, if a short-term change in signal strength of a predetermined magnitude has occurred, and a long-term change in signal strength of a predetermined magnitude has occurred;

a signal strength indicator for indicating the strength of the incoming

signal, and the short-term and long-term signal strength change detectors respectively determine short-term and long-term changes in signal strength responsive to the indication of signal strength provided by the signal strength indicator;

~~The system of claim 9~~ wherein the short-term signal strength change detector is configured to determine A_n, a current moving average of M samples of a_n, the indication of signal strength provided by the signal strength indicator, and B_n, a previous moving average of M samples of a_n, where M is a non-negative integer.

11. (Original) The system of claim 10 wherein the signal strength change detection logic is configured to determine if a short-term change in signal strength of sufficient magnitude has occurred by determining if the ratio of A_n to B_n exceeds a predetermined threshold.

12. (Original) The system of claim 10 wherein the short-term signal strength change detector is configured to determine C_n, a long-term average of a_n, in accordance with the following expression: $C_n=(1-\sigma)*C_{n-1}+ a_n$, where σ is less than or equal to 1, and indicates the relative weights to be given to C_{n-1} and a_n in the computation of C_n.

13. (Original) The system of claim 12 wherein the signal strength change detection logic is configured to determine if a change in signal strength of predetermined magnitude has occurred by determining if the ratio of A_n to C_n exceeds a predetermined magnitude.

14. (cancelled)

15. (Currently amended) A burst detection system for detecting a burst in an incoming signal comprising:

a signal strength change detector for determining strength changes in the incoming signal;

signal strength detection logic for determining if a change in signal strength of a predetermined magnitude has occurred;

a pattern detector for monitoring patterns of symbols in the incoming signal to determine if a predetermined pattern is present;

a burst detector for signaling a detection of a burst if the signal strength change detection logic determines that a signal strength change of predetermined magnitude has occurred and the pattern detector determines that a predetermined pattern of symbols is present;

a signal strength indicator for indicating the strength of the incoming signal;

a short-term signal strength change detector for determining, responsive to the signal strength indicator, short-term changes in signal strength, and a long-term signal strength change indicator for determining, responsive to the signal strength indicator, longterm changes in signal strength;

wherein the signal strength detection logic is configured to determine, responsive to the short-term and long-term signal strength change detectors, if a short-term change in signal strength of a predetermined magnitude has occurred, and a long-term change in signal strength of a predetermined magnitude has occurred;

a symbol detector for detecting symbols, or estimates thereof, in the incoming signal, and the pattern detector monitors the symbols or estimates provided by the symbol detector to determine if a predetermined pattern of symbols is present;

wherein the incoming signal is a quadrature baseband signal, and the symbol detector determines soft estimates $\delta\theta_n$ of the symbols; and

~~The system of claim 14 further comprising~~ a symbol spaced differentiator for determining, responsive to the samples $\delta\theta_n$ from the symbol detector, $\delta\delta\theta_n = \delta\theta_n - \delta\theta_{n-L}$ where L is the number of samples/symbol.

16. (Original) The system of claim 15 wherein the pattern detector determines if a predetermined pattern of symbols is present responsive to the values $\delta\delta\theta_n$ from the symbol spaced differentiator.

17-28 (cancelled)

29. (Currently amended) A method for detecting a burst in an incoming signal comprising:

monitoring short-term signal strength changes in the incoming signal to determine if a short-term change in signal strength of predetermined magnitude has occurred;

monitoring long-term signal strength changes in the incoming signal to determine if a long-term change in signal strength of predetermined magnitude has occurred;

monitoring patterns of symbols in the incoming signal to determine if a predetermined pattern is present;

performing the foregoing three monitoring steps in parallel;

signaling detection of a burst if a short-term signal strength change of predetermined magnitude has occurred, a long-term signal strength change of predetermined magnitude has occurred, and a predetermined pattern of symbols is present;

indicating the strength of the incoming signal, and monitoring short-term and long-term changes in signal strength responsive to the indication of signal

strength; and

~~The method of claim 28 further comprising~~ determining A_n, a current moving average of M samples of a_n, the indication of signal strength, and B_n, a previous moving average of M samples of a_n, where M is a non-negative integer.

30. (Original) The method of claim 29 further comprising determining if a short-term change in signal strength of sufficient magnitude has occurred by determining if the ratio of A_n to B_n exceeds a predetermined threshold.

31. (Original) The method of claim 29 further comprising determining C_n, a long-term average of a_n, in accordance with the following expression: $C_n=(1-\sigma)\bullet C_{n-1} + \sigma \bullet a_n$, where a is less than or equal to 1, and indicates the relative weights to be given to C_{n-1} and a_n in the computation of C_n.

32. (Original) The method of claim 31 further comprising determining if a change in signal strength of predetermined magnitude has occurred by determining if the ratio of A_n to C_n exceeds a predetermined magnitude.

33. (Cancelled)

34. (Currently amended) A method for detecting a burst in an incoming signal comprising:

monitoring short-term signal strength changes in the incoming signal to determine if a short-term change in signal strength of predetermined magnitude has occurred;

monitoring long-term signal strength changes in the incoming signal to determine if a long-term change in signal strength of predetermined magnitude has

occurred;

monitoring patterns of symbols in the incoming signal to determine if a predetermined pattern is present;

performing the foregoing three monitoring steps in parallel;

signaling detection of a burst if a short-term signal strength change of predetermined magnitude has occurred, a long-term signal strength change of predetermined magnitude has occurred, and a predetermined pattern of symbols is present;

detecting symbols, or estimates thereof, in the incoming signal, and monitoring the symbols or estimates to determine if a predetermined pattern of symbols is present;

wherein the incoming signal is a quadrature baseband signal, and the method further comprises determining soft estimates $\delta\theta_n$ of the symbols; and

~~The method of claim 33 further comprising~~ determining, responsive to the samples $\delta\theta_n$, $\delta\delta\theta_{n=} \delta\theta_n - \delta\theta_{n-L}$, where L is the number of samples/symbol.

35. (Original) The method of claim 34 further comprising determining if a predetermined pattern of symbols is present responsive to the values $\delta\delta\theta_n$.

36 - 42 (Cancelled)